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REMARKS

The present Response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

Status of Claims

Claims 1-4, 7-11 and 18-23 are pending in the application and have been finally rejected.

Claims 1, 7, 8 and 23 have been amended herein. Applicants state that these amendments add no new matter to the application.

Claims 21 and 22 have been canceled herein without prejudice or disclaimer. In making this cancellation without prejudice, Applicant reserves all rights in this claim to file divisional and/or continuation patent applications.

Claim Objections

Claims 1-4, 7-11 and 18-23 are objected to because of informalities.

Claim 1 is objected to because the term "operate through" is unclear. In response, Applicants have amended independent claim 1 to clarify that the image sensor, the lens and the illumination source are situated behind the single optical dome, such that the illumination source provides illumination through the optical dome, and the image sensor captures light reflected from an in vivo object through the optical dome and the lens. The amendments are supported in the specification, for example at page 9, lines 1-24.

Claim 7 is objected to because it depends from a canceled base claims. In response, Applicants have amended claim 7 such that it depends from claim 1.

Claim 8 is objected to because it is unclear how the tool comprises a transmitter. In response, Applicants have amended claim 8 to clarify that the transmitter is incorporated within said central body.

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Claim 21 is objected to because the limitations do not further limit the structure of the apparatus. In response, Applicants have canceled claim 21.

Claim 22 is objected to because it fails to limit the claim from which it depends. In response, Applicants have canceled claim 22.

Claim 23 is objected to because it is unclear how the tool comprises a battery. In response, Applicants have amended claim 23 to clarify that the battery is incorporated within said central body.

35 U.S.C. § 103 Rejections

In the November 24, 2008 final Office Action, the Examiner rejected claims 1-4, 8, 11 and 21-22 under 35 U.S.C. § 103(a), as being unpatentable over Adair (U.S. Patent No. 5,817,015) in view of Kubota (U.S. Patent No. 4,319,563). Applicants traverse this rejection in view of the remarks that follow.

Adair describes an endoscope having an elongated cylindrical core with a transparent window at the distal end thereof. The Examiner refers to Figure 9 of Adair as showing the window 12 covering all of the optical elements of an imaging portion of the endoscope. The Examiner states that the image sensor 16, a lens 19, illumination sources 14 are all placed behind the optical window 12.

Kubota teaches end portions of a plurality of light conducting optical fibers disposed inside an outer sheath of an endoscope which is to be inserted into a body cavity are exposed directly to the outside through an opened distal end of the sheath and have an exposed end face that is formed into a smooth, spherical convexity. The Examiner admits that window 12 of Adair is not disclosed as being a dome, but alleges that Kubota teaches an optical window with a convex dome shaped optical window and that it would have been obvious to incorporate the dome shaped end of Kubota in the system of Adair.

Applicants note that independent claim 1 has been amended herein to recite that the imaging unit comprises a single dome-shaped window, a lens and an illumination source, said dome-shaped window having a convex shape and providing a space behind said window and within said convex shape, and wherein the image sensor, the lens and the illumination source are situated behind the single dome-shaped window and within said space, such that the

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illumination source provides illumination through the dome-shaped window, and the image sensor captures light reflected from an in vivo object through the dome-shaped window and the lens. Applicants have thus defined the dome-shaped window as having a convex shape that creates hollow space behind the window and within its shape.

As admitted by the Examiner, Adair does not teach a dome-shaped window. Similarly, Applicants point out that, contrary to the Examiner's allegation regarding the "dome" of Kubota, Kubota does not teach a dome-shaped window having a convex shape and providing a space behind said window and within said convex shape. In fact, end face 22 of sheath 11, as shown in Fig. 7 of Kubota, is a solid window having one convex surface and one flat surface. Thus, Kubota does not teach that the dome-shaped window has a convex shape that creates a space behind the window and within its shape.

The difference between the claimed invention and Kubota is significant, because using the Kubota configuration for imaging in-vivo requires the ability to distance the tip from the object. Thus, in an environment when the tissue is up against the tip, the illumination (going through channel 23) will be blocked and will not be reflected to the lens. Fig. 9 of Adair would have the same problem. But the configuration in amended independent claim 1 can be used even when the object collapses on the tip of the endoscope because of the dome shaped window that provides a space behind the window and within the convex shape so as to distance the tissue from the illumination elements and the lens that are in the space created by the dome. Thus, even combining the teachings of Adair and Kubota would still not make the claimed invention obvious.

For a combination of references to make obvious a claim, the combination must include each and every element of the claim. Since the combination of Adair and Kubota does not include all elements of Applicants' amended independent claim 1, amended independent claim 1 is allowable over these combinations of references. Accordingly, Applicants contend that claim 1 is not obvious over Adair in view of Kubota and respectfully request that this rejection be withdrawn.

Dependent claims 2-4, 8, 11 and 21-22 incorporate all the limitations of amended independent claim 1, such that those claims are allowable for the same reasons that amended

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independent claim 1 is allowable. Thus, Applicants respectfully request that this rejection be withdrawn.

In the November 24, 2008 final Office Action, the Examiner also rejected claims 1-4, 7-10, 18-20 and 22-23 under 35 U.S.C. § 103(a), as being unpatentable over Ueda et al. (U.S. Patent No. 5,681,260) in view of Gadzinski (U.S. Patent Application Publication No. 2001/0051766). Applicants traverse this rejection in view of the remarks that follow.

The Examiner states that Ueda et al. discloses a guiding apparatus for guiding an insertable body within an inspected object and does not disclose a device that the illumination source, the image sensor and the lens are behind a single optical dome. The Examiner states that Gadzinski teaches an improved endoscopic device cites having an optional dome-shaped lens cover that may be placed over the illumination sources, imaging sensor and lenses. According to the Examiner, it would have been obvious to incorporate the design of the imaging portion in the system of Ueda.

Applicants note that independent claim 1 has been amended herein to recite that the imaging unit comprises a single dome-shaped window, a lens and an illumination source, said dome-shaped window having a convex shape and providing a space behind said window and within said convex shape, and wherein the image sensor, the lens and the illumination source are situated behind the single dome-shaped window and within said space, such that the illumination source provides illumination through the dome-shaped window, and the image sensor captures light reflected from an in vivo object through the dome-shaped window and the lens. Thus, independent claim 1 has been amended so that that the imaging unit requires a dome-shaped window as having a convex shape that creates hollow space behind the window and within its shape.

Applicants point out that Ueda et al. does not teach an imaging unit comprising a single dome-shaped window having a convex shape and providing a space behind said window and within said convex shape. Ueda et al. also has two separate optical windows, such that Ueda et al. does not disclose that the illumination source provides illumination through the single dome-shaped window and that the image sensor captures light reflected from an in vivo object through the dome-shaped window and the lens.

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Similarly, Gadzinski teaches a lens cover 1008 that conforms to the outer surface of the lenses. However, despite this shape, the lens cover 1008 of Gadzinski is not a dome-shaped window having a convex shape and providing a space behind said window and within said convex shape.

For a combination of references to make obvious a claim, the combination must include each and every element of the claim. Since the combination of Ueda and Gadzinski does not include all elements of Applicants' amended independent claim 1, amended independent claim 1 is allowable over these combinations of references. Accordingly, Applicants contend that claim 1 is not obvious over Ueda in view of Gadzinski and respectfully request that this rejection be withdrawn.

Dependent claims 2-4, 7-10, 18-20 and 22-23 incorporate all the limitations of amended independent claim 1, such that those claims are allowable for the same reasons that amended independent claim 1 is allowable. Thus, Applicants respectfully request that this rejection be withdrawn.

The Examiner rejected claim 11 under 35 U.S.C. § 103(a), as being unpatentable over Ueda in view of Gadzinski and further in view of Ishikawa et al. (U.S. Patent No. 6,264,611). The Examiner rejected claim 21 under 35 U.S.C. § 103(a), as being unpatentable over Ueda et al. in view of Gadzinski and further in view of Snoke et al. (U.S. Patent No. 5,846,221).

Each of claims 11 and 21 depends from amended independent claim 1, which, as described above, is allowable over Ueda et al. in view of Gadzinski. Neither Ishikawa nor Snoke cures the deficiencies of Ueda and Gadzinski. Therefore, claims 11 and 21 are likewise allowable, and Applicants request that the Examiner withdraw the rejection of claims 11 and 21.

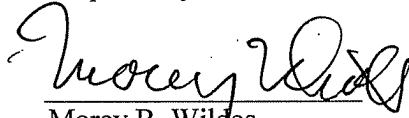
In view of the foregoing amendments and remarks, Applicants assert that the pending claims are allowable. Their favorable reconsideration and allowance is respectfully requested.

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Should the Examiner have any question or comment as to the form, content or entry of this Amendment, or if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to contact the undersigned at the telephone number below.

Please charge any fees that are due to deposit account No. 50-3355.

Respectfully submitted,



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